Towers under 200 feet

Sub-group No. 2

Sheldon Moss
Personal Communications
Industry Association (PCIA)

Special Thanks *to*
Jim Fryer *of*
Fryer's Site ***Guide***
for the following **data**

The following **analysis was based** on **data** from the ***Fryer's Site Guide.***

Region	1000 ft. and over	999-501 feet AGL	500-401 feet AGL	400-201 feet AGL	200 ft. and under
East	**102**	523	838	7,515	17,169
Southeast	565	1,091	3,082	23,054	16,033
Midwest	400	850	2,500	15,550	14,500
Texas/ MidSouth	360	717	2,281	12,943	12,440
Towers over 200 feet				**86,023**	
Total towers In Fryer's Site Guide database (total of all regions)					**170,087**
Estimated % **Guyed**	98%	87%	75%	45%	10%
Estimated number of guyed towers/ category	1,643	3,339	7,414	31,772	8,406
Total estimated number of guyed towers					**52,579**

Note: Jim Fryer estimates there may be as many as 235,000 towers in the US. The data referenced here is based an towers listed in the *Fryer's Guide*.

Analysis of existing towers less than 200 feet:

East	**17,169**
Southeast	**16,033**
Midwest	**14,500**
Texas/ MidSouth	12,440
West	**23.922**
TOTAL	**84,064**
Guyed/ % (est.)	10%
Guyed/ number (est.)	8,406
With Aviation Lighting/ % (est.)	Estimated range from 15% to 20%
At 15% (est.)	12,610
At 20% (est.)	16,813

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

In Reply Refer To
FWS/DHC/BFA

NOV 2 1999

Mr. William E. Kennard
Chairman, Federal Communications Commission
445-12th Street, S.W.
Washington, D.C. 20554

Dear Mr. Kennard:

During the past 3 years, the Fish and Wildlife Service has had discussions with staff of the Federal communications Commission regarding compliance with the National Environmental Policy Act and the Council on Environmental Quality regulations for implementing the Act. The Service's concerns involve the FCC's regulations in 47 CFR 1.1301-1.1319, and how those regulations are being interpreted by FCC personnel, cellular communications, radio, and television industries regarding the impact of communications towers on migratory birds, including several threatened and endangered species, and nongame species of management concern.

The Service has concerns with the way communications towers are planned, sited, and constructed. These towers, especially guy-wired structures taller *than* 199 feet above ground level, can be a hazard to migratory birds, especially night-migrating songbirds. While lighting for towers taller than 199 feet AGL is required by the Federal Aviation Administration to avoid aircraft accidents, certain types of lighting may attract birds to the towers, where they frequently collide with the tower or guy wires and are killed. This phenomenon is especially deadly to night-flying migrants during foggy, stormy conditions. Documented cumulative losses of birds since 1955 number over 1 million. In 1979, the Service published a peer-reviewed article estimating tower-kill mortality for 1,100 towers at 1.375 million birds per year. FCC data from February 1999 indicate the presence of 48,642 lighted towers (excluding "poles") in the United States taller than 199 feet *AGL.* Current conservative *estimates* of annual mortality put the kill figure at 2.275 to 4 million birds, based on extrapolations from previous Service and other estimates. The actual figure may vary upward by an order of magnitude.

FCC actions that affect migratory birds arc not specifically listed in 47 CFR 1.1307(a) and (b) as requiring preparation of an Environmental Assessment by license applicants, unless those birds are also endangered or threatened species. The omission of non-endangered migratory birds in these regulations for implementing NEPA suggests, and is interpreted by FCC personnel and the communications industry to mean that their activities do not have any significant adverse impacts *to* migratory birds, and are therefore categorically excluded from the environmental analysis process. The regulations in 47 CFR 1.1307(c) and (d) provide for exceptions under

which an environmental assessment can be required for non-listed species through the submission of detailed justification by either an outside party or FCC. However, these exceptions provide no real protection, since current FCC policy contained in 47 CFR 1.1305 places on licensees, the responsibility of deciding which of their actions require the submission of environmental information. It is our understanding that the licensees routinely pass this requirement on to the contractors building the towers, with almost no environmental oversight by FCC. Because of this interpretation of the intent of NEPA and the limited participation by FCC in the NEPA documentation process, substantial losses of migratory birds are not being accounted for in FCC's permit and NEPA decision-making process.

The number of communications towers has been growing rapidly since the 1970's, with tower construction and placement increasing at an exponential rate in the last 2 years. Due to the development of cellular telephones and the subsequent development of the personal communication service industry, the FCC estimates that tower construction in the United States now exceeds 5,000 new towers per year. The digital television medium, legislatively mandated to be in place by the year 2003,.will likely require the construction of an additional 1,000 new towers greater than 1,000 feet in height within the next 5 years. New tower construction can be expected to total 50,000 or more within the next decade. The cumulative impacts of the proliferation of communications towers on migratory birds, added to the combined cumulative impacts of all other mortality factors, could significantly affect populations of many species.

The Service believes that FCC should prepare a programmatic Environmental Impact Statement to delineate the true impacts of tower construction and to identify ways to reduce those impacts by incorporating measures in the applicant's permits to minimize losses to migratory birds. We would Like to meet with you to discuss this matter. To arrange a meeting, please contact Dr. Benjamin N. Tuggle, Chief, Division of Habitat Conservation, at 703/358-2161.

Sincerely,

DIRECTOR

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

March 21,2000

Jamie Rappaport Clark
Director
Fish and Wildlife Service
United States Department of Interior
1849 C.Street, N.W.
Washington, DC 20240

Dear Ms. Clark:

I am responding to your letter of November 2, 1999, which requests that the Federal Communications Commission (FCC) prepare a programmatic Environmental Impact Statement (EIS) to delineate the potential effect communications facilities may have on the migratory bird population and to institute appropriate mitigation measures.

The FCC takes its environmental responsibilities seriously and is very concerned about the impact of communications towers on migratory birds. For that reason, we have participated actively in various meetings and conferences with the Fish and Wildlife Service (FWS), other federal agencies. ornithological groups and industry representatives in examining this issue. We also have volunteered as a member of the Communication Tower Working Group organized by FWS to help develop the research that needs to be conducted to better understand this matter. Recently, we advised Bill Evans, an ornithologist working in conjunction with FWS, that we will encourage tower owners' voluntary participation in his research regarding the effects of tower lighting on migratory birds, and that we will process expeditiously any required lighting modifications [as recommended by the FAA). We will conrinue to offer our assistance in this manner with a view toward understanding and ultimately helping to develop measures to address this issue.

At this juncture, as you know, there is very little study and research, and thus no consensus within the scientific community, on the issue of what impact communications towers have on the migratory bird population and what, if any, mitigation measures could be effective. Moreover, the FCC docs not have the requisite expertise in. and does not have the authority or the appropriations necessary to fund basic generic research on. this issue. Until the necessary research and study is undertaken and some consensus is reached by the expert government agencies and scientific entities *to* determine the circumstances in which communications towers pose a risk to migratory birds, we do not believe it appropriate for the FCC to undertake the expansive, generic EIS effort you describe.

Once scientific standards are established by the appropriate expert bodies. however, I can assure you that the FCC will take all necessary action to ensure that our licensing activities take into account the impact on migrator?, birds. I note that the FCC has taken similar action in other areas. For instance, the FCC, lacking the expertise to develop health and safety radiofrequency ("RF") radiation guidelines on its own, adopted rules to address RF radiation environmental effects by incorporating standards developed by private scientific organizations and endorsed by expert federal agencies such as EPA and OSHA. *See* 47 C.F.R. § 1.1307(b). In the RF radiation area, the FCC did not independently develop the underlying basic research. but instead gave deference to established guidelines and standards that were developed by the scientific entities and that were recommended by other expert federal agencies. I believe a similar approach is appropriate here.

In the meantime, we remain sensitive to this issue and remain committed to the initiatives described above. Further, we will continue our policy of addressing migratory bird issues in the context of specific cases when presented with a demonstrable showing that particular communications towers will significantly affect migratory birds. *See* 47 C.F.R. § 1.1307(c); *see also Tanja L. Kozicky, Esq.*, 11 FCC Rcd 4161 (1996); *Leelanau County, Michigan*, 9 FCC Rcd. 6901 (1994); *Caloosa Television Corp.*, 3 FCC Rcd 3656 (1988). We look forward to continuing cur partnership with FWS and the other members of the Communication Tower Working Group, as the scientific community develops the research that is needed to better understand the potential impact of communi tions towers on migratory birds. I fully endorse these efforts and hope that swift proj ss is made in completing the basic underlying research so that the FCC can then t e all appropriate action on this matter.

We welcome the opportunity to discuss this matter with you further. I hav sked Thomas Power. my senior legal advisor, to be available to meet with Dr. Tuggle a lany other representatives of your staff. Please call him at (202) 418-1000 to an ge s mutually convenient time.

Sincerely,

William E Kennard
Chairman

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. **20240**

In Reply Refer To:
FWS/DFPA/BFA

NOV 20 2000

Mr William E. Kennard
Chairman. Federal Communications Commission
445-12th Street, S.W.
Washington, D.C 20554

Dear Mr. Kennard:

As you are aware, construction of communicatious towers in the United States has been gro ing at an exponential rate for the past several years, increasing **at** an estimated ***6*** percent to S per nt annually. **As a** result, Fish and Wildlife Service field offices are experiencinga large increa in the number of requests for review of proposed tower sites **by** FCC licensees, tower construct on companies, and their environmental consultants Among other possible impacts, the constru ion of new towers creates apotentially significant impact on migratory buds, especially some 350 species of night-migrating birds. While there is a considerable body of research availab on bird **strikes** at towers and the measures which can be taken to avoid them, this knowledge *is* not widely known outside the academic community. The Fish and Wildlife Service, in order to provide our field personnel with the information necessary to respond to requests for tower sitf evaluations, has assimilated the best available research on bird/tower interactions and developed a set of guidelines for communications tower siting, construction, operation and decommissioning. We believe that widespread use of these guidelines will significantly reduce the loss of migratory **birds** at towers.

The guidelines (enclosed) *are* voluntary and non-binding on both the industry and Service personnel. They are considered interim guidelines representing the best measures presently available for avoiding fatal bird collisions. The Service will continue *to* work with the communications industry, other government agencies, and non-governmental organizations through the Communication Tower Working Group *'to* devise additional, more effective measures for avoiding bird strikes. **As** new information becomes available, the interim guidelines will be updated accordingly.

We believe it would be beneficial for the FCC to make the interim guidelines available to all applicants requesting Federal communications licenses, in order to distribute the information more widely among the communications and rower construction industries. We would like to meet with you at your earliest convenience to discuss the guidelines and to discuss options **for** broader dissemination of this information.

To arrange a meeting, please contact Dr. Benjamin Tuggle, Chief, Division of Federal Activities, at (703)358-2161, or Jon Andrew, Chief, Division of Migratory Bird Management, at (703)358-1714.

Sincerely,

/s/ Jamie Rappaport Clark

DIRECTOR

Enclosure

cc: 3012-MIB-FWS/Directorate Reading Files
3012-MIB-FWS/CCU Files
3245-MIB-FWS/ADFHC Files
840-ARLSQ-FWS/DADFHC Files
400-ARLSQ-FWS/DFPA/BFA Files
400-ARLSQ-FWS/DFPA/BFA Staff
400-ARLSQ-FWS/DFPA Files

FWS/DFPA/RWillis:gj:10/24/00:(703)358-2183
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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, **D.C.** 20240

September 14,2000

To: Regional Directors
From: Director /s/
Subject: Service Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers

Construction of communication? towers (including radio, television, cellular, and microwave) in the United States has been growing at an exponential rate, increasing at an estimated 6 percent to 8 percent annually. According ***to*** the Federal Communication Commission's *2000 Antenna Structure Registry*, the number of lighted towers greater than 199 feet above ground level (AGL) currently number over 45,000 and the total number of towers over 74,000. Non-compliance with the registry program is estimated at **24** percent to 38 percent, bringing the total to 92,000 to 102,000. By 2003, all television stations **must** be digital, adding potentially 1,000 new towers exceeding 1,000 feet AGL.

" he construction of new towers creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. Communications towers are estimated to kill 4-5 million birds per year, which violates the spirit and the intent of the Migratory Bird Treaty Act and the Code of Federal Regulations at Part 50 designed to implement the MBTA. Some of the species affected are also protected under the Endangered Species Act and Bald and Golden Eagle Act.

Service personnel may become involved in the review of proposed tower sitings and/or in the evaluation of tower impacts on migratory birds through National Environmental Policy Act review; specifically, Sections 1501.6, opportunity to be a cooperating agency, and 1503.4, duty to comment on federally-licensed activities for agencies with jurisdiction by law, in this case the MBTA, or because of special expertise. Also, the National Wildlife Refuge System Improvement Act requires that any activity on Refuge lands be determined as compatible with the Refuge system mission and the Refuge purpose(s). In addition, the Service is required by the ESA to assist other Federal agencies in ensuring that any action they authorize, implement, or fund will not jeopardize the continued existence of any Federally endangered or threatened species.

A Communication Tower Working Group composed of government agencies, industry, academic researchers and NGO's has been formed to develop and implement a research protocol to determine the best ways to construct and operate towers to prevent bird strikes. Until the research study is completed, or until research efforts uncover significant new mitigation measures, all Service personnel involved in the review of proposed tower sitings and/or the

evaluation of the impacts of towers on migratory birds should use the attached interim guidelines when making recommendations to all companies, license applicants, or licensees proposing new tower sitings. These guidelines were developed by Service personnel from research conducted in several eastern, midwestem, and ,southernstates, and have been refined through Regional review. They are based on the best information available at this time, and are the most prudent and effective measures for avoiding bird strikes at towers. We believe that they will provide significant protection for migratory birds pending completion of the Working Group's recommendations. As new information becomes available, the guidelines will be updated accordingly.

Implementation of these guidelines by the communications industry is voluntary, and our recommendations must be balanced with Federal Aviation Administration requirements and local community concerns where necessary. Field offices have discretion in the use of these guidelines on a case by case basis, and nay also have additional recommendations to add which are specific to their geographic area.

Also attached is a Tower Site Evaluation Form which may prove useful in evaluating [proposed towers and in streamlining the evaluation process. Copies may be provided to consultants or tower companies who regularly submit requests for consultation, as well as to those who submit individual requests that do not contain sufficient information to allow adequate evaluation. This form is for discretionary use, and may be modified as necessary.

The Migratory Bird Treaty Act (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, puts, and nests, except when specifically authorized by the Department of the Interior. While the Act has no provision for allowing unauthorized take, it must be recognized that some birds may be killed at structures scch as communications towers even if all reasonable measures *to* avoid it are implemented. The Service's Division of Law Enforcement carries out its mission to protect migratory birds not only through investigations and enforcement, but also through fostering relationships with individuals and industries that proactively seek to eliminate their impacts on migratory birds. While it is not possible under rhe Act to absolve individuals or companies from liability if they follow these recommended guidelines, the Division of Law Enforcement and Department of Justice have used enforcement and prosecutorial discretion in the past regarding individuals or companies who have made good faith efforts to avoid the take of migratory birds.

Please ensure that all field personnel involved in review of FCC licensed communications tower proposals receive copies of this memorandum. Questions regarding this issue should,be directed to Dr. Benjamin Tuggle, Chief, Division of Habitat Conservation, at (703)358-2161, or Jon Andrew, Chief, Division of Migratory Bird Management, at (703)358-1714. These guidelines will be incorporated in a Director's Order and placed in the Fish and Wildlife Service Manual at a future date.

Service Interim Guidelines For Recommendations On
Communications Tower Siting, Construction, Operation, and Decom issioning

1. Any company/applicant/licensee proposing to construct a new communicatic tower should be strongly encouraged to collocate the communications equipment on an exist communication tower or other structure (*e.g.*, billboard, water tower, or buildir nount). Depending on tower load factors, from 6 to 10 providers may collocate on an e ting tower,

2. If collocation is not feasible and a new tower or towers are to be constructe ommunications service providers should be strongly encouraged to construct towers no more tl *199* feet above ground level (AGL), using construction techniques which do not require guy w s (*e.g.*, use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal A ation Administration regulations permit.

3. If constructing multiple towers, providers should consider the cumulative ir acts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.

4. If at all possible, new towers should be sited within existing "antenna farms clusters of towers). Towers should not be sited in or near wetlands, other known bird con tration areas (*e.g.*, state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.

5. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, mini m intensity, anti minimum number of flashes per minute (longest duration between flashes) allc able by the' FAA. The use of solid red or pulsating red warning lights at night should be a ided. Current research indicates that solid or pulsating (beacon) red lights attract night-migr ng birds at a much higher rate than white sti-obe lights. Red strobe lights have not yet been idied.

6. Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see *Avian Power Line Interaction Committee (APLIC). 1994. Mitigating* **Bird Collisions** *with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp*, and *Avian Power Line*

Interaction Committee (APLIC). 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp. Copies can be obtained via the Internet at http://www.eei.org/resources/pubcat/enviro/, or by calling 1-800/334-5453).

7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint". However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.

8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommenhed. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.

10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access io the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

in order to obtain information on the extent to which these guidelines are being implemented, and to identify any recurring problems with their implementation which may necessitate modifications, letters provided in response to requests for evaluation of proposed towers should contain the following request:

> "In order to obtain information on the usefulness of these guidelines in preventing bird strikes, and to identify any recurring problems with their implementation which may

necessitate modifications, please advise us of the final location and specifications of the proposed tower, and which of the measures recommended for the protection of migratory birds were implemented. If any of the recommended measures can not be implemented, please explain why they were not feasible."

TOWER SITE **EVALUATION** FORM

1. Location (Provide maps if possible):
   State:_____ County:_____ Latitude/Longitude/GPS Grid._____
   City and Highway Direction (2 miles W on Hwy 20, etc.)_____
   _____

2. Elevation above mean sea level: _____

3. Will the equipment be co-located on an existing **FCC** licensed tower or other existing structure (building, billboard, etc.)? (y/n)_____ If yes, type of structure:_____
   If yes, no further information is required.

4. If no, provide proposed specifications for new tower:
   Height: _____ Construction type (lattice, monopole, etc.):_____
   _____
   Guy-wired? (y/n)_____ No. bands:_____ Total No. Wires: _____
   Lighting (Security & Aviation):_____
   _____
   _____

If tower will be lighted or guy-wired, complete items 5-19. If not, complete only items 19 and *20.*

5. Area of tower footprint in acres or square feet:_____

6. Length and width of access road in feet:_____

7. General description of terrain - mountainous, rolling hills, flat to undulating, etc Photogra of the site and surrounding area are beneficial:
   _____
   _____
   _____

8. Meteorological conditions (incidence of fog, low ceilings, etc.) _____
   _____

9. Soil type(s) _____

10. Habitat types and land use on and adjacent to the site, by acreage and percentage of total.
    _____
    _____
    _____

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
1-2-2004-SP-152-164

MAR 0 5 2007

Ms. Susan Kimmel, Attorney Advisor
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Subject: 'Review of Biological Assessments for Nine Telecommunications Facilities in Hawaii

Dear Ms. Kimmel:

This letter is in response to your request for technical assistance under section 7 of the Endangered Species Act of 1973 [16 U.S.C. 1531-1544], as amended, for nine telecommunications facilities located in Hawaii. These facilities were named in the April 9, 2004, Notice of Intent to Sue (NOI) filed with the Federal Communications Commission (FCC) by the American Bird Conservancy and the Forest Conservation Council in connection with the registration and continued operation of 13 antenna structures on the Hawaiian Islands. In August 2004, we reviewed the 13 towers named in the NOI and provided a list of federally listed species (threatened, endangered, proposed, and candidate species) that may occur near each facility. In that review we determined that four tower facilities located on the island of Oahu had no listed species or designated critical habitat present. The remaining nine facilities may have one or more of the following listed species present, and these species are the subject of the Biological Assessments (BAs) considered in this review:

Endangered: Hawaiian (dark-rumped) petrel (*Pterodroma phaeopygia sandwichensis*)
Hawaiian hoary bat (*Lasiurus cinerus semotus*)
Hawaiian hawk (= Io) (*Buteo solitarius*)
Hawaiian goose (= Nene) (*Branfasandvicensis*)
Threatened: Newell's shearwater (*Puffinus auricularis newelli*)

The subject BAs were received in the U.S. Fish and Wildlife Service (Service) Pacific Islands Fish and Wildlife Office from June though November 2005. As you are aware, we have had several changes in staffing and organization in the past year, and we have not been able to respond to your request in a timely manner. We apologize for any inconvenience this may have caused.

The following list is a summary of the tower facilities reviewed and the Endangered Species Act affect determinations l ed in the BAs:

Facility Name and Hawaiian Island Location	Type of Structure	Listed Species Addressed in the BA	BA Determination
Cingular – AT&T Naalehu, Hawaii FCC No. A0147567	A 220-foot tall lattice tower with red/white beacon light. There are no guy-wires associated with this facility.	Newell's Shearwater Hawaiian Petrel Hawaiian Hoary Bat Hawaiian Hawk	"May affect, not likely to adversely affect" (NLAA) for all species.
LeSea Broadcasting Corp. KWHR/Naalehu, Hawaii FCC No. A008703	Two, 244-foot tall, guyed-towers, with. a curtain antenna suspended between the towers.	Newell's Shearwater Hawaiian Petrel Hawaiian Hoary Bat Hawaiian Hawk	NLAA for all species.
LeSea Broadcasting Corp. KWHR/Naalehu, Hawaii FCC No. A008704	Two, 145-foot tall guyed-towers, co-located with the other KWHR structures.	Newell's Shearwater Hawaiian Petrel Hawaiian Hoary Bat Hawaiian Hawk	NLAA for all species.
Island Airwaves, Kaloko, Kalaoa, Hawaii FCC No. A0352919	A 305-foot tall lattice tower, with a whitestrobe light beacon at the top. There are no guy-wires associated with this tower.	Newell's Shearwater Hawaiian Hoary Bat Hawaiian Hawk	NLAA for all species.
Island Airwaves, Glenwood, Hawaii FCC No. A0352920	A 313-foot tall guyed-tower, lighted with red flashing strobe lights.	Newell's Shearwater Hawaiian Petrel Hawaiian Hoary Bat Hawaiian Hawk Hawaiian Goose	NLAA for all species.
lames Fakas Tower Kalaoa, Hawaii FCC No. A011913	4 500-foot tall guyed-tower, lighted with red flashing strobe lights.	Newell's Shearwater Hawaiian Hoary Bat Hawaiian Hawk	NLAA for Hawaiian hawk and hoary bat. No determination was made for Newell's shearwater.
American Tower Corp. Haupu Ridge, Koloa, Kauai FCC No. A0303694	4 250-foot tall guyed-tower, with red beacon strobe lights.	Newell's Shearwater Hawaiian Petrel Hawaiian Goose	NLAA for all species.
Visionary Related Entertainment - KQNG Lihue, Kauai FCC No. A00133478	A 405-foot tall guyed-tower, with red beacon lights.	Newell's Shearwater Hawaiian Petrel	NLAA for all species.
Visionary Related Entertainment – American Islands/KUAI Eleele, Kauai FCC No. A00653556	A 350-foot tall guyed-tower, with red beacon lights.	Newell's Shearwater Hawaiian Petrel	NLAA for all species.

Summary of the BA Affect Determinations and Rationale

The BAs provide a general review of the published infonnation concerning bird collisions at communications towers, and a review of the published data concerning the problems associated with urban light attraction and collisions for the Newell's shearwater and the Hawaiian petrel (listed seabirds). The BAs determine that the nine towers "may affect, but are not likely to adversely affect" (NLAA) the listed species evaluated. The rationale for these determinations is:

> Site surveys indicate listed species are not nesting at, or immediately adjacent to the tower sites, and therefore are not likely to be disturbed by tower operations and maintenance.
>
> Maintenance personnel have not reported finding any dead or injured listed species on the grounds under the towers.
>
> Thomas Telfer, a noted seabird expert and District Wildlife Manager on Kauai for 35 years, provided a sworn statement indicating that in his opinion the towers in question pose little risk to listed birds because the lights on the towers are not of the type or intensity that are known to attract seabirds and cause them to collide with objects.
>
> The height of the towers is lower than the average height that listed seabirds typically fly above ground level.
>
> The towers are generally located in rural areas without bright lights that might attract and blind approaching birds.
>
> Studies have not been conducted to determine whether communications towers in Hawaii have caused injury to listed species, and, literature reviews of bird mortality at communications facilities in the continental U.S. indicate seabirds rarely collide with communications towers.

Partial Concurrence for the AT&T 'Towerat Naahelu and the Island Airwaves Tower at Kaloko

Based on the information provided in the BAs, we agree that the single, lattice-tower structures located at Naahelu (FCC No. A0147567) and Kaloko (FCC No. A0352919) on the island of Hawaii may be less of a threat to night-flying listed seabirds than guy-wired towers. However, due to the lack of information, such as nighttime ornithological radar surveys at these sites, we cannot concur with the determination that these towers are not likely to adversely affect listed seabirds. The radar survey data compiled by Day et al. (2003) indicate that the Hawaiian petrel and the Newell's shearwater may transit these areas. Both seabird species could reasonably be expected to collide with lattice towers particularly ones that are over 200 feet in height. While we do expect that listed seabirds transit these areas in low numbers, we cannot concur that the affect e ac ion could be determined to be insignificant or discountable to listed seabirds.

The BAs indicate that habitat conditions at the Naahelu and Kaloko sites are not suitable for nesting seabirds, Hawaiian hawks, or roosting Hawaiian hoary bats. Therefore, these species are not likely to be disturbed or displaced by maintenance operations at these sites. The Hawaiian

hawk is a diurnal flyer that would not be expected to collide with a lattice tower. The Hawaiian hoary bat is a nocturnal flyer, but there is no published information that indicates bat species are at risk of collision with these types of structures. Therefore, we concur with the determination that the risk of collision for the Hawaiian hawk and Hawaiian hoary bat with lattice-style towers is discountable and is not likely to adversely affect these two species.

Service Non-concurrence with the BA Determinations for All Towers

We are not able to concur with the 'NLAA determinations for the nine identified towers. It is the Service's position that communications towers equipped with Federal Aviation Administration required lights and supported with multiple guy-wires present a collision hazard for listed seabirds. All of the towers listed in this review with the exception of the Cingular-AT&T Tower at Naalehu and the Island Airwaves:Tower at Kaloko, are guyed, lighted towers, and all towers are located in areas that the Service expects listed seabirds to be present. Night-time radar surveys have not been conducted at any of the tower sites to demonstrate that listed seabirds are not transiting through these areas. Based on radar studies of seabird movements on Kauai (Day and Cooper 1995), we expect that listed seabirds may be present over all land-areas of Kauai during the breeding season, including these tower sites. Similar radar surveys on the island of Hawaii have indicated the presence of listed seabirds at all coastal survey points on Hawaii except in the Kailua-Kona area (Day et al. 2003). Based on these data, we expect that listed seabirds are likely to be transiting through the areas occupied by the towers.

As stated in the BAs, there is no documented evidence that listed seabirds have collided with communications towers in Hawaii. However, there have been no systematic studies of bird strikes at towers in Hawaii (Day and Cooper 2004). In the absence of site-specific studies, the Service relies on the general published information concerning bird collisions at tower facilities.

The fact that many bird species are known to suffer injury or mortality from collisions with communications towers has been well documented (e.g., FCC 2006, Avatar Environmental 2004; Kerlinger 2000, Shire et al. 2000). The fact that listed seabirds in Hawaii are prone to collisions with powerlines and other structures is also well documented (e.g., Reed et al. 1985, Telfer et al. 1987, Cooper and Day 1998, Podolsky et al. 1998). As noted in the BAs, most of the reported Hawaiian seabird collisions and "fallout" events occur during the fall and are the result of fledgling birds becoming attracted to and disoriented by urban lights (Reed et al 1985; Telfer et al. 1987).

Adult and subadult seabird collisions with powerlines have also been documented throughout the summer nesting season (Tefler et al. 1987, Podolsky et al. 1998; Cooper and Day 1998). These summer collisions are not fallout events associated with urban light attraction (Tefler et al. 1987, Podolsky et al 1998). Rather, these collision events occur because the powerlines are located within the flight path of the birds, and the birds apparently do not see the lines until they are too close to avoid a collision (Cooper and Day 1995, Podolsky et al 1998). Cooper and Day (1995) have observed Newell's shearwaters flying over, through, and under powerline arrays, and have also observed individuals altering their flight to avoid collision with powerlines. However, they also observed a seabird strike a powerline and fall (Cooper and Day 1995).

Podolsky et al. (1998) estimated 350 adult and subadult seabirds die each summer as a result of collisions with powerlines on Kauai. These deaths are not correlated to light attraction,

Podolsky et al. (1998) indicate that the risk of adult seabird mortality at powerlines is correlated to the number and spread of lines in the powerline array. In multiple line arrays, a bird may attempt to avoid one line only to strike another (Podolsky et al. 1998).

We refer to these studies of adult seabird mortality at powerlines because these studies provide direct evidence that listed seabirds in Hawaii are prone to collisions with aerial lines, and that artificial light attraction is not always a causative factor in these collisions. In fact, non-fallout related collisions with powerlines may result in hundreds of listed seabird deaths annually (Podolsky et al. 1998, Cooper and Day 1998). Based on these studies, we expect that guy-lines at communications towers can also represent a collision hazard for listed seabirds. We acknowledge that the number of guy-lines at communications towers is minimal when compared to the many miles ofpowerlines located on Kauai and Hawaii. However, the smaller area associated with these facilities is not sufficient to discount the potential that a listed seabird could be injured or killed by a guy-wire collision. The Service views the death of a single threatened or endangered species to be significant. The BAs in question have not provided sufficient evidence to discount the possibility that the guyed-towers would not result in the injury or death of listed birds over the expected life of the facilities. The BAs indicate that no dead or injured listed birds have been found at these sites. However, there have been no systematic searches of these sites for dead birds, and bird carcasses are often scavenged. Podolsky et al. (1998) found that many seabird carcasses in their study disappeared within a matter of days, some within 24 hours.

In summary, we do not concur with the **NLAA** determinations provided by the BAs for the guyed towers. It is our position that these towers do present a collision hazard for listed seabirds. Based on radar studies in other locations on the islands, we expect that listed seabirds are likely to be transiting the tower vicinities. We expect that over the 25-year life of a tower, individual listed seabirds could be injured or killed by colliding with guy-wires at these towers. We recommend the FCC initiate formal consultation for all aforementioned towers.

We recognize that these towers are all currently licensed by the FCC and have been in operation for years. Because these facilities already exist, there are limited options for minimizing collision hazards for birds at these sites. However, there a number of wire-marking devices and other tools that could be used to reduce the risk: of avian collisions with aerial lines. We also encourage the use of radar surveys at tower facilities to determine the extent that listed seabirds are transiting the tower areas. We look forward to working with the FCC and the licensees to develop alternatives to minimize the risk of avian collisions at these facilities. We appreciate your efforts to conserve endangered species. If you have any questions regarding this letter, please contact Patrice Ashfield (phone 808/792-9400; fax: 808/792-9581).

Sincerely,

for Patrick Leonard
Field Supervisor

cc:

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John Detz, Visionary Related Entertainment, Inc., Wailuku, Hawaii

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April 23,2007

Marlene H. Dortch, Commission Secretary
Federal Communications Commission, Office of the Secretary
445 12th Street, SW
Washington DC 20054

Dear Federal Communications Commission:

These comments are submitted on behalf of the 34 scientific and conservation organizations representing millions of American citizens on the FCC Notice of Proposed Rulemaking regarding Communications Towers and Migratory Birds, WT Docket No. 03-187, FCC 06-164. We urge the FCC to end the years of delay and adopt rules that require measures to prevent bird deaths at all existing and new communications towers.

The available research and data clearly indicate that mortality at the 110,000 communication towers is biologically significant for a number of avian species and that, in any event, the mortality clearly has a significant impact for bird species under NEPA, requiring FCC action to prevent/mitigate such impacts. In the reply comments submitted by the U.S. Fish and Wildlife Service on March 9,2005 in the Notice of Inquiry proceeding, Dr. Albert Manville states that: "The population impacts to migratory songbirds (and other avifauna) and impacts to their population status are frightening and biologically significant." The FWS comments supported the analyses of avian mortality by Longcore et al. documenting the deaths of millions of migratory birds by species. The FWS again urged the FCC to adopt the FWS Tower Siting Guidelines. The Longcore et al. analyses demonstrate that even at the lowest end of estimated mortality, towers cause the deaths of at least 10,000 birds each of 19 species of U.S. FWS Birds of Conservation Concern. Two species have very high fatalities even at the lower end of estimated mortality: Bay-breasted Warbler at more than 150,000 fatalities/year, and Blackpoll Warbler at around 100,000 fatalities/year. More than 60 species of Birds of Conservation Concern are killed at towers.

In comments filed by Commissioner Michael J. Copps in the FCC NPRM, to which we concur, Commissioner Copps stated: "There is simply no question that bird-tower collisions are a serious problem. The U.S. Fish and Wildlife Service tells us that millions of birds, perhaps as many as 50 million, die each year through such accidents. That is a sobering conclusion coming from the federal agency with the greatest scientific expertise when it comes to wildlife conservation and primary responsibility for protecting migratory birds. The situation imposes a grave responsibility on ***this*** agency, too, because of our important jurisdiction over tower painting and illumination – a responsibility to make sure that our rules and practices do not contribute to a needless toll of bird deaths."

Under existing federal laws and court decisions, the FCC has not only the legal authority to regulate these antenna structures, but the legal obligation to do so. The FCC's own laws and rules authorize it to require lighting changes and other measures for towers to prevent bird mortality. Further, NEPA, ESA, and the MBTA all require the FCC to adopt procedures and measures to prevent, or at least minimize, bird fatalities caused by FCC registered antenna structures. For example, the MBTA prohibits the taking of a migratory bird without a permit, even if unintentional, and the FCC violates this statute by its actions in registering towers that kill these birds. Case law is clear on this under rulings by federal courts, including the U.S. Circuit in which the FCC is located. The FCC has a clear statutory duty under these laws to prevent bird fatalities by adopting avoidance and mitigation measures known to prevent bird kills without in any way inhibiting the provision of telecommunication services.

Based on research and other scientific documentation that the FCC possesses from current and previous submittals, and based on the U.S. FWS Tower Siting Guidelines, we recommend the following measures for adoption by the FCC under this proposed rulemaking:

1) An applicant for an antenna tower shall submit a written declaration to demonstrate why they have no viable opportunity for co-location of an antenna and that they cannot practicably keep a tower structure under 200', thus avoiding lighting requirements in order to better protect migratory birds. Over 10,000 dead birds have been found at one antenna tower in one day.

2) If a new antenna tower structure must be built, and if the structure cannot practicably be kept under 200', the FCC shall require that the FAA's April 6, 2004 Memorandum be followed and that medium intensity white strobe lights for nighttime conspicuity is to be considered the preferred system over red obstruction lighting systems to the maximum extent possible without compromising safety. The FCC has proposed such a change. Birds are attracted to red steady-burning lights which are commonly used on towers, and on bad weather nights in migration, the birds may fly around the lights until they drop from exhaustion, striking guy wires, the tower structure, and even flying into the ground.

3) In cases where the antenna tower is to be located in urban/populated areas, within three nautical miles of an airport, or where for reasons of aviation safety, zoning requirements, or for other reasons the use of white strobe lights at night time is not possible, and the applicant demonstrates such, medium intensity red strobe lights shall be used exclusively.

4) All existing registered antenna structures that employ red steady burning lights for night time use shall be required to phase in the FAA preferred white strobe lighting system or the use of red strobe or fast blinking lights to replace red steady burning lights for night time use. This should occur when steady burning red lights on existing antenna structures bum out or otherwise need to be replaced. All such towers shall terminate the use of red steady burning lights for nighttime use within five years of finalization of this rulemaking.

5) For any new antenna tower that is to be under 500' AGL, the applicant should not use guy wires unless certification is submitted by a qualified engineer that the structure cannot practicably be built as a monopole or of lattice design. In considering practicability, the applicant must demonstrate that guy wires are necessary because the tower cannot be built without guy wires because of safety concerns, significantly higher costs, or due to other engineering factors that require use of guy wires.

The use of red steady burning lights and guy wires are a lethal combination leading to the vast majority of bird deaths. The red steady burning lights attract the birds to swarm around the tower on bad weather nights. Nearly every mass mortality event of birds at tower structures is during the night and involves a guyed tower with red steady burning pilot warning lights. The Gehring et al. Michigan study documents that simply turning off red steady burning lights at night and using red or white pulsing lights, reduces bird fatalities by 71%. Towers at 400' can have 1.25 miles of guy wires and, in the Gehring et al. study, 90% of the avian mortality occurred from guy wires.

By adopting these simple measures involving co-location, use of strobe lights exclusively, ending the use of red steady burning lights, and keeping guy wires off of new towers where possible, bird deaths would be significantly reduced, if not eliminated, without in any way inhibiting the provision of communication services. We refer you to current and previous submittals by Longcore et al., American Bird Conservancy, U.S. FWS, and others in documenting the significance of the mortality, the legal basis for acting, and the mitigation measures we have urged above.

Respectfully Submitted,

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